

## REMARKS

### I. Summary

Claims 1 and 3-20 are pending in the application. In the non-final Office Action mailed July 13, 2005, each of claims 1 and 3-20 were rejected. The issues in the Office Action are:

- Claims 1, 3-6, 8, and 16-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tretter* (U.S. Patent No. 5,901,253) in view of *Zimmermann* (U.S. Patent No. 5,185,667).
- Claims 9, 10, 12, and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by *Zimmermann*.
- Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Zimmermann* in view of Sharp "GP1S36 Tilt Detecting Photointerrupter" (hereinafter Sharp).
- Claims 13, 14, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Zimmermann* in view of *Tretter*.
- Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tretter* in view of Sharp.

Applicant respectfully traverses all rejections made in the Office Action for the reasons advanced below.

### II. Claims Rejections under 35 U.S.C. § 102(b)

Claims 9, 10, 12, and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by *Zimmermann*.

To anticipate a claim under 35 U.S.C. § 102, a reference must teach every element of the claim. *See* M.P.E.P. § 2131.

Claim 9 recites “a tilt determining mechanism configured to automatically sense orientation errors of received images.” The Examiner asserts that *Zimmermann* teaches this limitation of claim 9 at column 3, lines 30-39. See Office Action, page 7. Applicant respectfully disagrees. At the cited portion, *Zimmermann* teaches:

The image transform processors are controlled by the microcomputer and control interface 5. The microcomputer control interface provides initialization and transform parameter calculation for the system.

The cited-to portion does not teach a tilt determining mechanism, much less teach a tilt determining mechanism configured to automatically sense orientation errors of received images. *Zimmermann* at numerous places teaches that tilt transformations are made according to a manual control input by a joystick or other input. See, e.g., col. 8, lines 15-20; col. 3, lines 39-45. Accordingly, *Zimmermann* fails to teach automatically sensing orientation errors, and does not teach all limitations of claim 9. Thus, claim 9 is not anticipated by *Zimmermann*.

Claim 16 recites “an orientation sensor automatically identifying an orientation of said image sensor with respect to said image captured by said image sensor.” The Examiner asserts that *Zimmermann* teaches this limitation of claim 16 at column 3, lines 30-39. See Office Action, page 7. The cited-to portion of *Zimmermann* teaches image transform processors and a control interface for transform parameter calculation. See *Zimmermann* at col. 3, lines 30-39. At the cited passage, *Zimmermann* does not disclose identifying an orientation of an image sensor, but only the transformation of a distorted image acquired through the intentional use of a fish-eye camera lens. *Zimmermann* does not teach an orientation sensor automatically identifying an orientation of an image sensor. The Examiner has previously admitted that “*Zimmermann* does not teach details on a tilt sensor” (see January 11, 2005 Office Action at page 3) and has not demonstrated that *Zimmermann* teaches any orientation sensors. Accordingly, *Zimmermann* does not teach an orientation sensor automatically identifying an orientation of an image sensor with respect to an image captured by an image sensor. Thus, *Zimmermann* does not teach all limitations of claim 16, and claim 16 is not anticipated by the cited reference.

Claims 10 and 12 depend directly from base claim 9, and thus inherit all of their limitations. Further, claims 10 and 12 set forth features and limitations not recited by *Zimmermann*. Thus, the Applicant respectfully asserts that, at least for the above reasons, claims 10 and 12 are patentable over the 35 U.S.C. § 102 rejection of record. In view of the above, Applicant respectfully requests that the Examiner withdraw the rejections of claims 9, 10, 12, and 16 and pass these claims to issue.

### III. Claim Rejections under 35 U.S.C. § 103(a)

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. § 2143. Applicants assert that the Examiner's rejections fail to meet the basic criteria.

#### **Claim Rejections over *Tretter* and *Zimmermann***

Claims 1, 3-6, 8, and 16-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tretter* in view of *Zimmermann*. Claim 1 has been amended to correct a typographic error. No new matter has been added. In addition, claims 13-15 are rejected as being unpatentable over *Zimmermann* in view of *Tretter*. Applicant respectfully traverses the rejection of claims 1, 3-6, 8, and 13-20, at least, for the reasons that follow.

#### **No Motivation to Combine *Tretter* and *Zimmermann***

It is well settled that the prior art must suggest the desirability of the claimed invention. See M.P.E.P. § 2143.01. Applicant asserts that, not only does the prior art not suggest the desirability of combination, the skew detection system of *Tretter* cannot be combined or modified to utilize the distortion correction system of *Zimmermann* in any meaningful manner. *Tretter* discloses correcting a skew angle of an image acquired by a scanner (see *Tretter* at abstract), whereas *Zimmermann*'s system corrects a distortion of an image acquired through a fish-eye camera lens (see *Zimmermann* at abstract; col. 4, lns. 12-47). However, there is no indication in *Tretter* that the tilted image acquired by the scanner contains any optical distortion such as the one caused by the hemispherical field-of-view of

*Zimmermann*'s camera lens. Hence, there is no reason, suggestion, or motivation to combine these references.

With respect to the rejection of claim 1, the Examiner states that it would have been obvious to combine the references because "it would have been obvious to one of ordinary skill in the art to incorporate old and well-known image processing technique [sic], such as receiving, identifying, determining, rotating and displaying into a digital camera system because they are all well-known image processing steps taught in processing images obtained by conventional optical camera means." Such language is merely a statement that the reference can be modified, and does not state any desirability for making the modification. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *See In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990), as cited in M.P.E.P. § 2143.01. Thus, the motivation provided by the Examiner is improper, as the motivation must establish the desirability for making the modification.

With respect to the rejection of claim 16, the Examiner states that "*Zimmermann* teaches ... reducing a misalignment of [an] image." *See* Office Action at page 5. However, Applicant points out that, at the cited passage, *Zimmermann* does not disclose reducing a misalignment, but only the transformation of a distorted image acquired through the intentional use of a fish-eye camera lens. The Examiner goes on to state that "[i]t would have been obvious ... to incorporate old and well-known image orientation correction technique into image captured by a digital camera because regardless of whether image is obtained by conventional optical camera or digital camera, both still require all the orientation distortion, including tilt and rotation." *See* Office Action at page 5. Applicant respectfully requests that the Examiner clarify this statement in order to properly formulate a response.

In view of the above, Applicant respectfully asserts that the Examiner has not provided motivation to combine the teachings of *Tretter* with *Zimmermann*. Accordingly, the rejections of claims 1, 3-6, 8, and 13-20 under 35 U.S.C. § 103(a) are not proper. Applicant respectfully requests that the Examiner withdraw the rejection of record and pass these claims to issue.

**Claim Rejections over *Zimmermann* in view of *Sharp***

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Zimmermann* in view of *Sharp*.

No Motivation to Combine the References

Applicant asserts that there is no motivation, either in the teachings of the references or in the knowledge of persons of ordinary skill in the art, to combine the distortion correction system of *Zimmermann* with the tilt detector of *Sharp*. *Zimmermann*'s system corrects a distortion of an image acquired through a motionless fish-eye camera lens, such as those used in security or surveillance applications (*see Zimmermann* at abstract; col. 4, lns. 12-47), whereas *Sharp*'s tilt sensor is an electro-mechanical device that determines motion and/or changes in the physical orientation of a camera (figure on page 3). Because there is no indication that the invention of *Zimmerman* is movable (*see, e.g.*, col. 8, lines 14-25) there is simply no reason, suggestion, or motivation to combine it with the tilt sensor of *Sharp*. Therefore, Applicant contends that it is not proper to combine *Zimmermann* and *Sharp*, and respectfully requests that the Examiner withdraw the 35 U.S.C. § 103 rejection of claim 11.

**Claim Rejections over *Tretter* in view of *Sharp***

Claim 7 stands rejected under 35 U.S.C. § 103 as being unpatentable over *Tretter* in view of *Sharp*. Applicant respectfully traverses this rejection, at least, for the reasons that follow.

No Motivation to Combine the References

Applicant asserts that there is no motivation, either in the teachings of the references or in the knowledge of persons of ordinary skill in the art, to combine the skew angle detection system of *Tretter* with the tilt detector of *Sharp*. *Tretter* discloses a skew angle detection system that corrects a skew angle of an image acquired by a scanner (*See Tretter* at abstract), whereas *Sharp*'s tilt sensor is an electro-mechanical device that determines motion and/or changes in the physical orientation of a camera (*See Sharp*, figure on page 3). Because there is no indication that *Tretter*'s scanner is movable, and also because it would be unnecessary to determine the orientation of the scanner in correcting a skew angle of a

scanned image (*See Tretter* at col. 1, lns. 14-30), there is simply no reason, suggestion, or motivation to combine it with the tilt sensor of *Sharp*. Therefore, Applicant contends that it is not proper to combine *Tretter* and *Sharp*, and respectfully requests that the Examiner withdraw the 35 U.S.C. § 103 rejection of claim 7.

#### IV. Conclusion

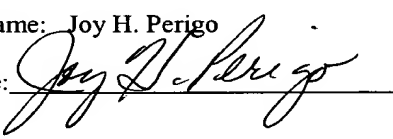
In view of the above, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-2025, under Order No. 10005753-1 from which the undersigned is authorized to draw.

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Label No. EV482711703US in an envelope addressed to: M/S Amendment, Commissioner for Patents, Alexandria, VA 22313.

Date of Deposit: 10-13-2005

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